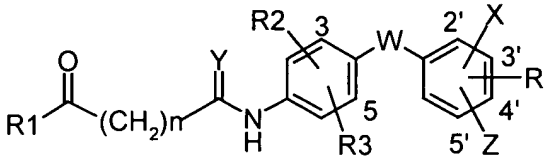
What is claimed is:

1. A compound of the formula



(I)

in which

W is O, S, S(O) or $S(O)_2$;

X is -SR4, -S(O)R4, $-S(O)_2R4$, or $-S(O)_2NR5R6$; X is or -C(O)NR5R6 located at the 3'-, 4'- or 5' position;

Y is O or $H_2$;

Z is hydrogen, halogen, hydroxy, optionally substituted alkoxy, aralkoxy, acyloxy or alkoxycarbonyloxy;

R is hydrogen, halogen, trifluoromethyl, lower alkyl or cycloalkyl;

R1 is hydroxy, optionally substituted alkoxy, aryloxy, heteroaryloxy, aralkoxy, cycloalkoxy, heteroaralkoxy or -NR5R6;

R2 is hydrogen, halogen or alkyl;

R3 is halogen or alkyl;

R4 is optionally substituted alkyl, aryl, aralkyl, heteroaralkyl or heteroaryl;

R5, R6 and R7 are independently hydrogen, optionally substituted alkyl, cycloalkyl, aryl, aralkyl, heteroaryl, or heteroaralkyl; or R5 and R6 combined are alkylene optionally interrupted by O, S, S(O), $S(O)_2$ or NR7 which together with the nitrogen atom to which they are attached form a 5- to 7- membered ring;

n represents zero or an integer from 1 to 4;

with the proviso that when X is -C(O)NR5R6, Z is different from hydrogen;

or a pharmaceutically acceptable salt thereof.

2. A compound according to claim 1 of formula I in which

W is O or S;

X is $-S(O)_2R4$; R4 being lower alkyl, phenyl or phenyl substituted by one or more substituents selected from the group consisting of lower alkyl, lower alkoxy, halogen and trifluoromethyl; or is $-S(O)_2NR5R6$; or is -C(O)NR5R6 located at the 3', 4' or 5'-position; R5, in each case, being hydrogen or lower alkyl and R6, in each case, being hydrogen, lower alkyl, lower alkyl substituted by NR5R6, 3- to 7-membered cycloalkyl, phenyl, phenyl substituted by one or more substituents selected from the group consisting of lower alkyl, lower alkoxy, halogen and trifluoromethyl; pyridyl or N-lower alkyl-2-pyridone; or

R5 and R6 combined, in each case, being alkylene or alkylene interrupted by O or $S(O)_2$ which together with the nitrogen atom to which they are attached form a 5- to 7- membered ring;

Y is O or $H_2$;

Z is hydrogen or hydroxy;

R is hydrogen;

R1 is hydroxy, lower alkoxy or NR5R6; R5 being hydrogen or lower alkyl and R6 being hydrogen, lower alkyl, lower alkoxy or R5 and R6 combined being alkylene or alkylene interrupted by O which together with the nitrogen atom to which they are attached form a 5- to 7- membered ring ;

R2 is hydrogen, halogen or lower alkyl;

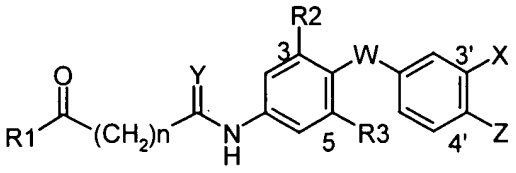
R3 is halogen or lower alkyl;

n represents zero, 1 or 2;

with the proviso that when X is -C(O)NR5R6, Z is different from hydrogen;

or a pharmaceutically acceptable salt thereof.

3. A compound according to claim 1 of the formula




(IA)

in which

W is O or S;

X is -SR4, -S(O)R4, -$S(O)_2$R4, -$S(O)_2$NR5R6 or -C(O)NR5R6;

Y is O or $H_2$;

Z is hydrogen, halogen, hydroxy, alkoxy, aralkoxy, acyloxy or alkoxycarbonyloxy;

R1 is hydroxy, lower alkoxy or aryloxy;

R2 is hydrogen, halogen or lower alkyl;

R3 is halogen or lower alkyl;

R4 is optionally substituted alkyl, aryl, aralkyl, heteroaryl or heteroaralkyl;

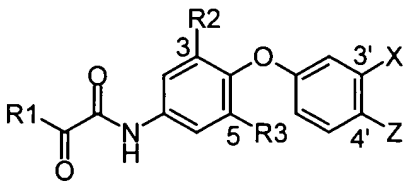
R5, R6 and R7 are independently hydrogen, optionally substituted alkyl, cycloalkyl, aryl, aralkyl, heteroaryl, or heteroaralkyl; or R5 and R6 combined are alkylene optionally interrupted by O, S, S(O), $S(O)_2$ or NR7 which together with the nitrogen atom to which they are attached form a 5- to 7- membered ring;

n represents zero, 1 or 2;

with the proviso that when X is -C(O)NR5R6, Z is different from hydrogen;

or a pharmaceutically acceptable salt thereof.

4. A compound according to claim 1 of the formula



(IB)

wherein

X is $-S(O)_2R4$, $-S(O)_2NR5R6$ or $-C(O)NR5R6$;

Z is hydroxy, lower alkanoyloxy or alkoxy;

R1 is hydroxy or lower alkoxy;

R2 and R3 are lower alkyl;

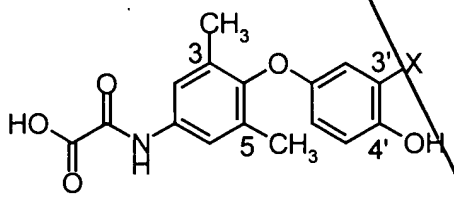
R4 is aryl;

R5, R6 and R7 are independently hydrogen, optionally substituted alkyl, cycloalkyl, aryl, aralkyl, heteroaryl, or heteroaralkyl; or R5 and R6 combined are alkylene optionally interrupted by O, S, S(O), $S(O)_2$ or NR7 which together with the nitrogen atom to which they are attached form a 5- to 7- membered ring; which may optionally contain another heteratom selected from oxygen, nitrogen and sulfur;

or a pharmaceutically acceptable salt thereof.

5. A compound according to claim 4 wherein X is $-S(O)_2R4$ or $-S(O)_2NR5R6$.

6. A compound of the formula



(IC)

wherein

X is $-S(O)_2R4$ or $-S(O)_2NR5R6$;

R4 is monocyclic aryl;

R5, R6 and R7 are independently hydrogen, optionally substituted alkyl or aryl; or R5 and R6 combined are $CH_2CH_2$-Q-$CH_2CH_2$ wherein Q is $CH_2$, O, NR7, S, S(O) or $S(O)_2$ which together with the nitrogen atom to which they are attached from a 6-membered ring; or a pharmaceutically acceptable prodrug ester thereof; or a pharmaceutically acceptable salt thereof.

7. A compound according to claim 6 wherein X is $S(O)_2R4$ and R4 is phenyl optionally substituted by lower alkyl, halo, lower alkoxy or trifluoromethyl; or a pharmaceutically acceptable salt thereof; or a pharmaceutically acceptable prodrug ester thereof.

8. A compound according to claim 6 which is selected from:

N-[4-(4-Hydroxy-3-phenylsulfamoylphenoxy)-3,5-dimethylphenyl]oxamic acid;

N-[4-(4-Hydroxy-3-isopropylsulfamoylphenoxy)-3,5-dimethylphenyl]oxamic acid;

N-[4-(4-Hydroxy-3-isobutylsulfamoylphenoxy)-3,5-dimethylphenyl]oxamic acid; and

N-{4[3-(4-Fluorobenzenesulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}oxamic acid;

or a pharmaceutically acceptable salt thereof; or a pharmaceutically acceptable prodrug ester thereof.

9. ~~A compound according to claim 6 which is:~~

N-{4[3-(4-Fluorobenzenesulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}oxamic acid;

or a pharmaceutically acceptable salt thereof; or a pharmaceutically acceptable prodrug ester thereof.

10. A compound according to claim 1 which is selected from:

N-{4-[3-(2,2-Dimethylpropylsulfamoyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}oxamic acid;

N-[4-(4-Hydroxy-3-phenylsulfamoylphenoxy)-3,5-dimethylphenyl]oxamic acid;

N-{4-[3-(4-Fluorophenylsulfamoyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-{3-(2-Fluorophenylsulfamoyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[3-(3-Fluorophenylsulfamoyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[4-Hydroxy-3-(4-methoxyphenylsulfamoyl)phenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[3-(4-Fluorobenzylsulfamoyl)-4-hydroxy-phenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[4-Hydroxy-3-(methylphenylsulfamoyl)phenoxy]-3,5-dimethylphenyl}oxamic acid;

N-[4-(4-Hydroxy-3-propylsulfamoylphenoxy)-3,5-dimethylphenyl]oxamic acid;

N-[4-(4-Hydroxy-3-isopropylsulfamoylphenoxy)-3,5-dimethylphenyl]oxamic acid;

N-[4-(3-Butylsulfamoyl-4-hydroxyphenoxy)-3,5-dimethylphenyl]oxamic acid;

N-[4-(4-Hydroxy-3-isobutylsulfamoylphenoxy)-3,5-dimethylphenyl]oxamic acid;

N-[4-(3-t-Butylsulfamoyl-4-hydroxyphenoxy)-3,5-dimethylphenyl]oxamic acid;

N-[4-(3-Cyclohexylsulfamoyl-4-hydroxyphenoxy)-3,5-dimethylphenyl]oxamic acid;

N-[4-(3-Dimethylsulfamoyl-4-hydroxyphenoxy)-3,5-dimethylphenyl]oxamic acid;

N-{4-[4-Hydroxy-3-(pyrrolidine-1-sulfonyl)phenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[4-Hydroxy-3-(piperidine-1-sulfonyl)phenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[4-Hydroxy-3-(2-methoxyethylsulfamoyl)phenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[4-Hydroxy-3-(morpholine-4-sulfonyl)phenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[3-(Dioxothiomorpholine-4-sulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[4-Hydroxy-3-(pyridin-3-ylsulfamoyl)phenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[4-Hydroxy-3-(1-methyl-6-oxo-1,6-dihydropyridin-3-ylsulfamoyl)phenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[3(4-Fluorophenylsulfamoyl)-4-hydroxyphenylsulfanyl]-3,5-dimethylphenyl}oxamic acid;

N-{4-[3-(4-Fluorophenylsulfamoyl)phenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[3-(4-Fluorophenylsulfamoyl)-4-hydroxyphenoxy]-3-methylphenyl}oxamic acid;

N-{4-[3-(4-Fluorobenzenesulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}oxamic acid;

N-[4-(3-Benzenesulfonyl-4-hydroxyphenoxy)-3,5-dimethylphenyl]oxamic acid;

N-{4-[3-(4-Chlorobenzenesulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[4-Hydroxy-3-(toluene-4-sulfonyl)phenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[4-Hydroxy-3-(4-methoxybenzenesulfonyl)phenoxy]-3,5-dimethyl-phenyl}oxamic acid;

N-{4-[4-Hydroxy-3-(4-trifluoromethylbenzenesulfonyl)phenoxy]-3,5-dimethylphenyl}oxamic acid;

N-[4-(4-Hydroxy-3-methanesulfonylphenoxy)-3,5-dimethylphenyl]oxamic acid;

N-{4-[3-(Butane-1-sulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[4-Hydroxy-3-(propane-2-sulfonyl)phenoxy]-3,5-dimethylphenyl}oxamic acid

N-{4-[3-(4-Fluorobenzenesulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}malonamic acid;

N-{4-[3-(4-Fluorobenzenesulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}succinamic acid;

3-{4-[3-(4-Fluorobenzenesulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenylamino}propionic acid;

N-{4-[3-(4-Fluorobenzenesulfonyl)-4-hydroxyphenoxy]-3-methylphenyl}oxamic acid;

N-{3,5-Dibromo-4[3-(4-fluorobenzenesulfonyl)-4-hydroxyphenoxy]phenyl}oxamic acid;

N-{4-[3-(4-Fluorobenzenesulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}oxalamide;

N-{4-[3-(4-Fluorobenzenesulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}-N'-propyl-oxalamide;

N-{4-[3-(4-Fluorobenzenesulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}-N'-isopropyl-oxalamide;

N-Butyl-N'-{4-[3-(4-fluorobenzenesulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}-oxalamide;

N-{4-[3-(4-Fluorobenzenesulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}-N'-(2-methoxyethyl)oxalamide;

N-{4-[3-(4-Fluorobenzenesulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}-2-morpholin-4-yl-2-

oxoacetamide;

N-{4-[3-(4-Fluorobenzenesulfonyl)-4-hydroxyphenoxy]-3,5-dimethylphenyl}-2-morpholin-4-yl-2-oxoacetamide;

N-{4-[4-Hydroxy-3-(piperidine-1-carbonyl)phenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[4-Hydroxy-3-(morpholine-4-carbonyl)phenoxy]-3,5-dimethylphenyl}oxamic acid;

N-[4-(3-Cyclohexylcarbamoyl-4-hydroxyphenoxy)-3,5-dimethylphenyl]oxamic acid;

N-{4-[4-Hydroxy-3-(2-methoxyethylcarbamoyl)phenoxy]-3,5-dimethylphenyl}oxamic acid;

N-{4-[4-Hydroxy-3-(2-morpholin-4-yl-ethylcarbamoyl)phenoxy]-3,5-dimethylphenyl}oxamic acid; and

N-{4-[4-Hydroxy-3-(pyridin-3-ylcarbamoyl)phenoxy]-3,5-dimethylphenyl}oxamic acid;
or a pharmaceutically acceptable salt thereof.

11. A method for prevention and/or treatment of conditions responsive to thyromimetic activity in mammals which comprises administering to a mammal in need thereof an effective amount of a compound according to claim 1.

12. A method for the prevention and/or treatment of a disease associated with an imbalance of thyroid hormones and for the prevention and/or treatment of occlusive cardiovascular conditions in which hyperlipidemia and hyperlipoproteinemia are implicated and for the prevention and treatment of hypo- and hyper-thyroidism, obesity, osteoporosis and depression, for the reduction of total cholesterol plasma levels and levels of LDL-cholesterol and for the prevention and treatment of atherosclerosis and coronary heart disease which comprises administering to a mammal in need thereof an effective amount of a compound according to claim 1.

13. A method of lowering LDL cholesterol levels in mammals which comprises administering to a mammal in need thereof an effective LDL-cholesterol lowering amount of a compound according to claim 1.

14. A method for the prevention and/or treatment of occlusive cardiovascular conditions in mammals which comprises administering to a mammal in need thereof an effective cholesterol lowering amount of a compound according to claim 9.

15. A method of lowering Lp(a) levels in mammals which comprises administering to a mammal in need thereof an effective Lp(a) lowering amount of a compound according to claim 1.

16. A method of treating hyperlipidemia and hyperlipoproteinemia in mammals which comprises administering to a mammal in need thereof an effective amount of a compound according to claim 9.

17. A method of treating atherosclerosis and coronary heart disease which comprises administering to a mammal in need thereof an effective amount of a compound according to claim 9.

18. A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 9 in combination with one or more pharmaceutically acceptable carriers.

19. A method of lowering LDL cholesterol levels in mammals which comprises administering to a mammal in need thereof an effective LDL cholesterol lowering amount of a compound according to claim 9.

20. A method of lowering Lp(a) levels in mammals which comprises administering to a mammal in need thereof an effective Lp(a) lowering amount of a compound according to claim 9.